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ABSTRACT

This pamphlet presents some innovative thoughts and suggestions to make gardening an "accessible" activity for any gardener, able-bodied or disabled. For gardeners with special needs, workability of the garden must take precedence over a conventional garden design. Designs to consider include raised bed gardens, garden containers such as whiskey barrels and drainage pipes, and commercial garden containers. Deciding what to plant requires consideration of the size of the garden, amount of time available, location, personal taste, and ability to harvest and store produce. Tools can be matched to specific needs, such as tools appropriate for use from a seated or kneeling position, tools for people who find it painful or impossible to bend, tools for use by one-handed gardeners, and tools for those who have a weak grasp or limited dexterity. Suggestions are offered for protecting body posture and for adapting available tools. Twenty-four sources for special tools are listed. (14 references) (JDD)

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GARDENING FOR ALL

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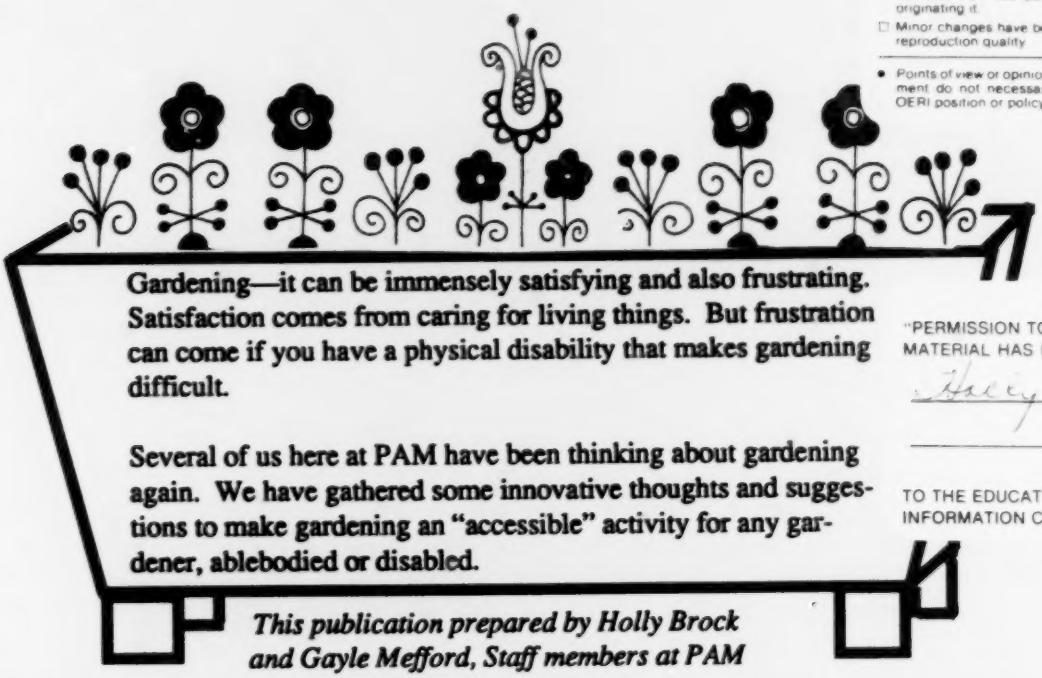


Gardening—it can be immensely satisfying and also frustrating. Satisfaction comes from caring for living things. But frustration can come if you have a physical disability that makes gardening difficult.

Several of us here at PAM have been thinking about gardening again. We have gathered some innovative thoughts and suggestions to make gardening an "accessible" activity for any gardener, ablebodied or disabled.

This publication prepared by Holly Brock and Gayle Mefford, Staff members at PAM

The coming of spring brings a sense of anticipation to most of us. After the long "dead" of winter we anxiously wait to see the first signs of spring: green shoots from the bulbs planted in the fall, swollen buds on trees and bushes about to burst, blooming crocus and forsythia. It is exciting to see new life again. Spring smells good and looks fresh.

A garden can also be exciting, from planning the type of garden you'd like, to selecting which flowers and vegetables would grow best in that garden, to harvesting those beautiful vegetables and flowers.

Persons of all ages, with widely differing abilities and interests, enjoy growing all kinds of things, and handicapped persons are no exception. A sense of achievement is felt when seeds sprout and plants flourish, for barriers are non-existent for gardeners. Plants simply respond to care and attention—they make no differentiation. All they need is proper care. They in turn can provide the setting in which a person can take the first step toward self-confidence.

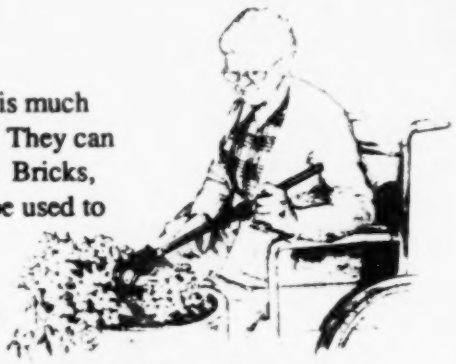
EC 232622

PLANNING YOUR GARDEN

Three general areas of concern should be considered when thinking about having a garden; (1) size and type of garden or garden container most suitable for your capabilities (indoor or outdoor), (2) type of flowers and/or vegetables you'd like to grow and (3) tools and equipment necessary.

SPECIAL GARDENS

A gardener with special needs will need a special garden. Workability of a garden must take precedence over a conventional garden design. And as enthusiastic as you may be, be careful not to make your garden too large at first. Begin small and add to your garden as you feel comfortable and able. Keep in mind that a garden can grow indoors as well as outdoors.

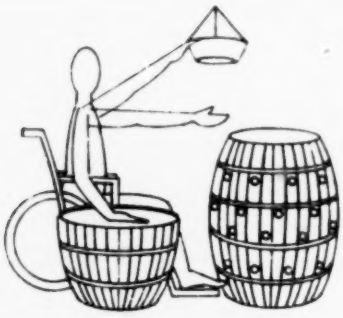


Raised Bed Garden

One type of garden to consider is a raised bed garden. The raised bed is much easier to work on from the seated position than a ground level garden. They can be built from several kinds of materials, expensively or inexpensively. Bricks, concrete slabs, cinder blocks, railroad ties and landscape timbers can be used to construct a raised bed garden.

The size of your garden is very important, too. If you will be working from the seated position the recommended height is two feet. For the ambulant non-bender an additional six inches of height will make a more comfortable work area. If the garden will be worked from only one side, the maximum width should be two feet. If accessed from both sides, maximum width should be four feet. Pathways between the beds should be wide enough for easy movement and maneuverability, usually 3 to 4 feet wide. Arrange your garden beds at right angles and make beds various lengths and widths to create an attractive total appearance to your entire garden.

Proper drainage is essential for a productive garden. In a raised bed garden adequate drainage is achieved by properly filling the structure. In the bottom of your frame place approximately 4 inches of broken bricks or stones, followed by a layer of gravel. Fill the remainder of your bed with a soil mix of 2 parts topsoil, 1 part sand and 1 part peat moss.



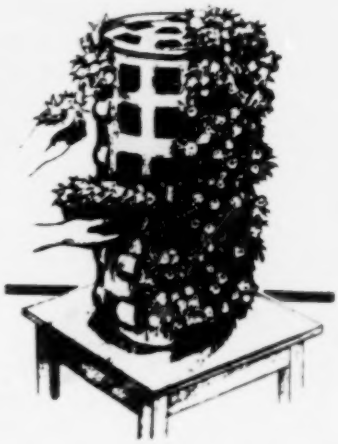
Garden Containers

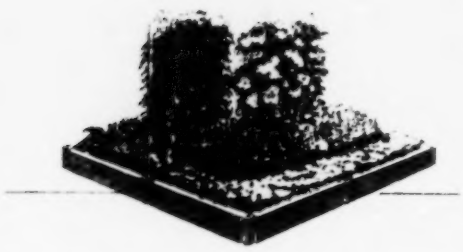
Perhaps you'd feel more comfortable with a smaller kind of garden. There are a variety of containers available appropriate for planting. Besides the commercial products, which can be costly, consider some other options. Flute tiles and drainage pipes come in a variety of sizes and are made of terra cotta similar to clay pots, but are much more durable. Whiskey barrels, whole or half, work well as long as an adequate number of drainage holes are drilled. Gutter pipe, wooden

boxes, old cabinet drawers, bushel baskets, plastic pails, metal buckets, garbage cans, styrofoam coolers, window boxes, milk cartons and plastic bleach bottles can all be used to hold plants of different sorts! Provide drainage holes where needed. Cover the bottom with stones, and fill container with a soil mix of 1/3 sand, 1/3 peat moss and 1/3 commercial compost. Pre-mixed soil can be purchased from your local garden supplier.

Commercial Garden Containers

If desired, commercially manufactured garden containers can be purchased from several sources. Living Wall Gardens have created a family of vertical containers from which plants can grow out of the sides. Units can be used separately or as building blocks which can be stacked, nested or attached to make many shapes and sizes. Each comes ready to plant. Units vary in size (round or square) to hold from 13 to 67 plants each.





Mantis Manufacturing created the "Garden Grid" from 8" molded poly "logs" which snap together to make a compact raised bed. The hollow "logs" serve as an irrigation system.

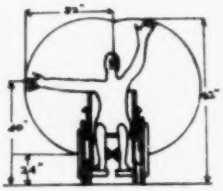
A patio tower can be purchased from a number of garden suppliers such as Stark Brothers Nurseries or Plow and Hearth. They are available 2 feet or 4 feet tall and take as little as 4 square feet of space while holding up to 50 plants.

WHAT TO PLANT

Before deciding whether to plant flowers, vegetables, herbs or to have a mixed garden, you need to take a few factors into consideration. Think about the size of your garden, the amount of time you have available to devote to your garden, location (indoors or outdoors) and your personal taste. Also consider your ability to harvest and store your produce.

A flower garden needs much less attention than does a vegetable garden. Annual flowers need to be newly planted every year and they supply a wealth of color, form and texture. Perennial flowers are more expensive initially but will return each year. An herb garden requires little care and can grow in an outdoor garden or inside on a windowsill. There are both annual and perennial herbs. A vegetable garden requires the most time and effort, but the harvest can be enjoyed long after the garden season is over if you grow enough to can or freeze.

Consider plant height to be sure your "working range" will allow you to care for them. Also be sure that you are able to plant seeds and bulbs as deeply as required. Investigate which plants will grow compatibly and which will not tolerate each other. Many flowers and vegetables are available in dwarf varieties, including vines and fruit trees. Be aware of when your vegetables will be ripe and stagger plantings so your whole crop will not be ready for picking at the same time.



If you are not able to deal with a large harvest of fruits and vegetables, perhaps you could plant a salad garden, plants that produce fruit at about the same rate that you are able to eat them.

Once you've decided what to plant, you can choose from seeds or started plants. Seeds are least expensive but require thinning and careful weeding. Seeds can be started indoors before it is warm enough outside. Some seeds are available in a pelleted form which are easier to handle or as a biogradable seed tape. Started plants cost more but are easier to put into the ground and are not as delicate as new seedlings

TOOLS

THE MOST IMPORTANT TOOL

"The most important tool remains your own body, handicapped though it may be, without it all the other tools are useless. It must therefore be used with maximum efficiency. Strong and healthy gardeners often wantonly misuse their bodies, but the handicapped cannot afford such waste. The problem is to find the balance between excessive use of vulnerable parts of the body and the fullest use of other joints and muscles which will weaken if they are given nothing to do."

The Source Book for the Disabled, edited by Glorya Hale.

There are four basic tools used to cultivate soil in a conventional garden. From the most to the least effort involved, they are the spade, fork, hoe and rake. A handicapped gardener may find it necessary to have a few more tools to help him overcome his disability. A simple variation to a basic tool may be adequate, or a specially designed tool may work best.

The chart that follows lists several tool options and shows which ones are most suitable for specific disabilities. Before purchasing a tool consider your size, your strength, your garden size and the type of soil you'll be working in. Look for the sturdiest yet lightest models that you can afford. Handle them and if at all possible try to use them. Generally you will need tools to help (1) prepare soil for planting, (2) seeding and transplanting (3) watering, (4) weeding and cultivating and (5) harvesting.

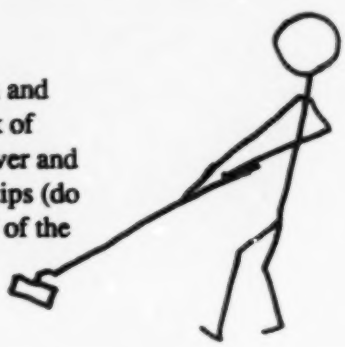
Try to keep your tools together in a basket or tool rack so you won't have to keep hunting for your tools. Put brightly colored tape or paint on tool handles to assist in finding misplaced tools, or to help you identify different tools.

Sketch from the Information Bulletin, Vol. 2, No. 1, 1984 of the Disabled Living Resource Centre, The Kinsmen Rehabilitation Foundation of British Columbia.

PROTECT YOUR BODY

Posture for Hoeing

It is better to work from an erect position and use a long-handled hoe. You run the risk of stretching the sciatic nerve by bending over and exerting force on your hoe. Bend from hips (do not hunch over) and keep one foot ahead of the other.



RIGHT

WRONG

RIGHT

WRONG

Posture for Lifting-Carrying

Lifting objects with a rounded back will put stress on your spine. One must bend down with knees, put one arm underneath the object, then straighten knees to rise. Keep an arm underneath object while carrying. Before putting object on ground drop onto one knee.

WRONG

RIGHT

Posture For Working Low

Another stress factor for your sciatic nerve may be when you use both knees and your back becomes rounded. Long-lasting problems may be caused from only a short time in this position. It is best to work with only one knee on ground keeping your back as straight as possible. Some of the most powerful muscles are in your legs. Locked knees will immobilize these muscles. The spinal column is not a joint as an elbow or a hip. One must consider it more like a flexible rod which connects the pelvis and head.

MATCHING TOOLS TO YOUR NEEDS

We offer the following guide to help you select tools for your gardening ease and pleasure. Note that most of these are "regular" tools, not adapted equipment. Good quality tools are not inexpensive. Wisdom in selection is the key to wise spending. Keep in mind that these are only selected samples of equipment and sources.

The limitation will be listed (A through D) and the recommended products will be indicated under the appropriate column. The source where the product may be purchased will be given under the column headed "Resource."

A Tools appropriate for use from a wheelchair or from a seated or kneeling position, for persons who cannot stand comfortably to garden.

B Tools designed for people who find it painful or impossible to bend.

C Tools which can be used by the one-handed gardener.

D Tools which can be used by those who have a weak grasp or limited dexterity.

TOOLS	RESOURCES	A	B	C	D
GARDENING CONTAINERS	13, 15, 17, 18, 19, 23	X	X		
SOIL PREPARATION					
Rake	2, 5, 14, 18, 19, 20, 21, 24		X	X	
Easy-Roll Cultivator	7, 12		X		
Handle Attachments	1, 16, 24		X	X	
PLANTING					
Earth Drill	5, 9, 21	X		X	
Kneeler with hand supports (also for weeding)	1, 2, 5, 6, 8, 9, 19, 20, 24	X	X		
Kneeling Cushion (also for weeding)	5, 9, 24	X			
Kneel Pads (also for weeding)	1, 2, 16, 20, 21	X			
Hand Seed Dispenser	9, 12, 13, 18, 24			X	X

TOOLS	RESOURCES	A	B	C	D
Rolling Seeder (From standing position)	7, 9, 12, 13, 24	X	X	X	X
Seeds, pellets	12			X	X
Hand Tools (Especially Designed)	2, 5, 8, 9, 12, 14, 20, 21, 24				X
WEEDING AND CULTIVATING					
Weed Popper-Long Handled	1	X	X		
Weeder (No Scooping)	2, 5, 18	X	X		
Light Weight Tools	8, 9, 20, 24			X	X
Tool rack, basket on a cane	2, 8, 24	X	X	X	
Swan-Neck Hoe	9, 13, 24	X	X		
Long-Handled Tools	2, 7, 9, 11, 12, 13, 14, 18, 20, 24	X	X		
WATERING					
Water Wand	4, 9, 12, 22, 24	X		X	X
Mini-Hose and Wand	5	X		X	X
Faucet Extender	2, 8, 19, 21, 22			X	X
Watering Can with Long Spout and Good Balance	2, 8, 9, 12, 14, 20, 24			X	X
PRUNING					
Well Designed	2, 3, 5, 9, 12, 13, 20, 24	X		X	X
Long-Handled	2, 3, 4, 5, 12, 13, 19, 22, 24	X	X		
OTHER HELPFUL AIDS					
Plant Caddy, Pulley	2, 8, 24		X	X	X
Bagger	1, 2, 18, 21	X	X	X	X

TOOLS	RESOURCE	A	B	C	D
Leaf Grabbers	21		X		X
Seats on Wheels	1, 2, 5, 9, 19, 22	X	X		X
Wheeled Carts	2, 6, 9, 12, 14, 17, 19, 20, 21, 22		X		X

Our resources are bubbling over with myrids of helpful items. For instance, how many of you have used or even thought about using planters on pulleys; paper shredders for that extra mulch so needed; a hydropore hose for thorough soaking of soil, gardening by the square foot (little or as large as you want); gardening in a plastic bag, or just simply using self-watering pots?

RESOURCES FOR SPECIAL TOOLS

1. Access with Ease, Inc.
P.O. Box 1150
Chino Valley, AZ 86323
602-636-9468

2. Alsto Company
1515 Paddock Drive
Northbrook, IL 60062
312-729-6681

3. American Standard Company
P.O. Box 325
Planysville, CT 06489
203-628-9643

4. Benny's Express
P.O. Box 38
Coventry, RI 02816
800-456-1700

5. Brookstone
300 Vose Farm Road
Petersborough, NH 03458
603-924-9511

6. David Kay
26055-D Emery Road
Cleveland, OH 44128
800-621-5199

7. Earl May Nursery, L.P.
208 N. Elm Street
Shenandoah, IA 51603
800-831-4193

8. Gardener's Eden
Box 7307
San Francisco, CA 94120-7307
415-421-4242

9. Gardener's Supply
128 Intervale Road
Burlington, VT 05401-2804
800-863-1700

10. Gladys E. Leob Foundation, Inc.
2002 Forest Hill Drive
Silver Springs, MD 20903
301-434-7748

11. Hammacher & Schlemmer
9180 Le Saint Drive
Fairfield, OH 45014
800-543-3366

12. Harris Seeds
60 Saginaw Drive
P.O. Box 22960
Rochester, NY 14692-2960
716-442-9386

13. Henry Field's Seed & Nursery
Shenandoah, IA 51602
605-665-4491

14. John Deere
1400 Third Ave.
Moline, IL 61265
800-544-2422

15. Living Wall Garden Company
Div. of Curious Research
2044 Chili Ave.
Rochester, NY 14624
716-247-0070

16. Maddak, Inc.
Pequannock, NJ 07440-1993
201-694-0500

17. Mantis Manufacturing Co.
1458 County Line Road
Huntington Valley, PA 19006
800-366-6268

18. Park Seed
Cokesbury Road
Greenwood, SC 29647-0001

19. Plow & Hearth
301 Madison Rd.
P.O. Box 830
Orange, VA 22960
800-627-1712

20. Smith & Hawken
25 Corte Medera
Mill Valley, CA 94941-1829
415-383-2000

21. Solutions
P.O. Box 6878
Portland, OR 97228
800-342-9988

22. Sporty's
Clermont Airport
Batavia, OH 45014
800-543-8633

23. Stark Bros. Nursery
Louisianna, MO 63353
800-325-4180

24. Walter Nicke Company
Box 433 McLeod Lane
Topsfield, MA 01983
508-887-3388

SUGGESTIONS FOR ADAPTATIONS

1. To pad handles for a better grip, try taping a piece of self-adhering foam around the end of a handle halfway down the shaft of a rake or hoe.

Handlebar grips for bikes and trikes come in various sizes. These, too, can be fitted over the ends of handles.

Foam rubber pipe insulation which comes in a variety of sizes is another medium for use in the padding of handles for easier gripping power.

2. To reduce the need for bending, or to make it possible to dig from a wheelchair, try fixing an extra handle halfway down the shaft of a fork or spade.

3. A pressure sprayer with a long tube and nozzle can be used to avoid lifting of water cans. Probably some type of permanent or semi-permanent water system should be worked out so that watering can be done by a simple twist of a faucet.

4. If a trowel is too heavy, perhaps a plastic flour scoop would work.

5. A big scoop can be made by cutting down a plastic one-gallon container, one with a built-in handle.

6. Bath tub benches (sold at medical supply stores) can be used as garden stools to sit on while you work.

7. A tool and utensil holder which is an aid for people with limited gripping ability can be used to hold the small, flatter-handled tools used for flower pot gardening or transplanting.

8. Garden aprons with large pockets for carrying utensils can eliminate some of the problems for gardeners with physical limitations. These aprons can be made with velcro straps or an apron clip for easier "put-on" qualities.

9. For easier-to-find tools, perhaps spraying handles with red paint and then adding sight-saving bright yellow tape at the ends of the handles would be a solution.

10. If one has wrist weakness or poor grip, a wrist splint used with light hand tools offers excellent support. A medical supply store would have several kinds to choose from.

11. A support for standing and a handy walking stick could be the tools themselves, used upside down. A cane or crutch tip could be slipped on end of tools which increases safety and protects the wood. One-inch cane tips are the right size for most handles.

12. Don't forget, much pleasure can be gained from a mini-garden using a wide-mouthed jar, fish tank, etc., and they take much less maintenance.

GARDENING FOR SPECIAL POPULATIONS—SELECTED REFERENCES

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